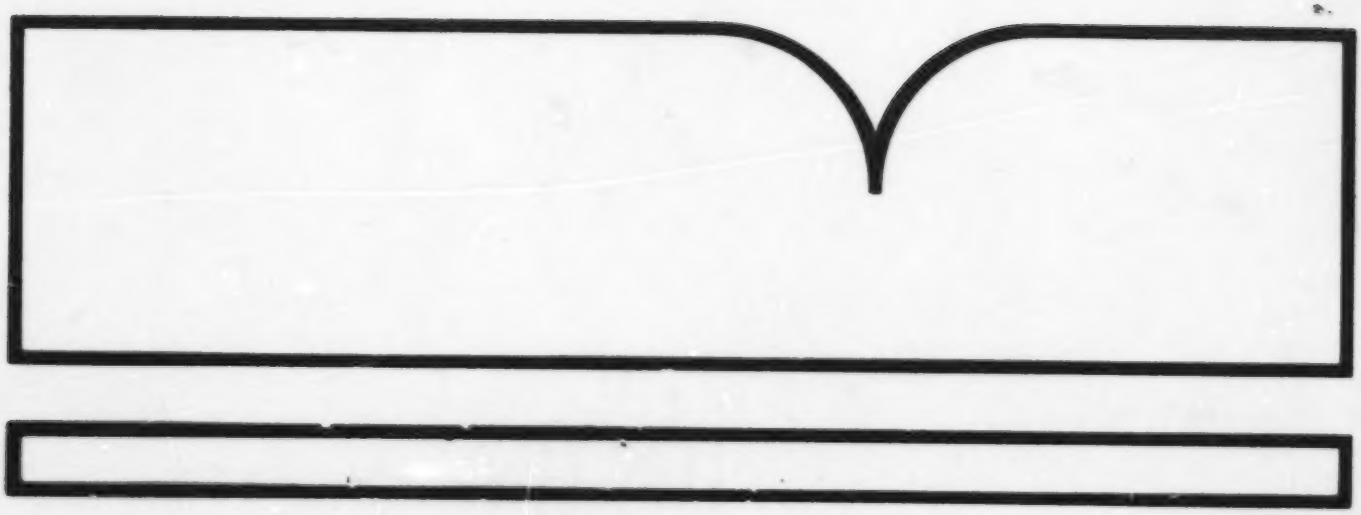
PB89-153753

Superfund Record of Decision (EPA Region 6)
Bailey Waste Disposal Site, Orange, Texas
June 1988. First Remedial Action

(U.S.) Environmental Protection Agency
Washington, DC

28 Jun 88



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Environmental Protection
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Emergency and
Remedial Response

EPA/ROD/R06-88/035
June 1988

PB89-153753

EPA

Superfund Record of Decision:

Bailey Waste Disposal, TX

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15. Supplementary Notes

16. Abstract (Limit: 200 words)

The Bailey Waste Disposal site is an inactive industrial waste facility located approximately 3 miles southwest of Bridge City, Orange County, Texas. The site is part of a saltwater marshland near the confluence of the Neckes River and Sabine Lake, and lies within the 100-year floodplain. The site occupies approximately 280 acres and includes two rectangular ponds, A and B, constructed by dredging the marsh and piling the sediments to form levees. The ponds were constructed in the mid-1950s as part of the Bailey Fish Camp, which operated until the 1960s. Industrial wastes, primarily organics, were disposed of along the north and east margins of Pond A during the 1950s and 1960s. Four separate areas of contamination in the vicinity of the ponds have been identified. They include: a waste channel, located north of Pond A that contains a minimum of 44,000 yd^3 of industrial waste and debris; an area east of Pond A, that contains 21,000 yd^3 of municipal and industrial waste; a drum disposal area south of Pond A, that contains fifty-eight corroded drums with an estimated volume of 80 yd^3 of industrial waste; and a series of waste pits, north of Pond A and west of the waste channel, that contains 1900 yd^3 of tar-like wastes. The primary contaminants of concern affecting the sediments include: VOCs including benzene and toluene, aromatic and chlorinated hydrocarbons, organics including PAHs, and metals.
(See Attached Sheet)

17. Document Analysis a. Descriptors

Record of Decision
Bailey Waste Disposal, TX
First Remedial Action - Final
Contaminated Media: sediments
Key Contaminants: metals, organics (PAHs), VOCs (benzene, toluene)

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report) None	21. No. of Pages 27
	20. Security Class (This Page) None	22. Price

(See ANSI-Z39.18) See Instructions on Reverse OPTIONAL FORM 272 (4-77) (Formerly NTIS-35) Department of Commerce

EPA/ROD/R06-88/035
Valley Waste Disposal, TX
First Remedial Action - Final

16. ABSTRACT (continued)

The selected remedial action for this site includes: relocation, consolidation and treatment of contaminated sediments and wastes using a solidification technique developed during design followed by onsite disposal and capping of the residual matrix. The estimated present worth for this remedial action is $13,700,000.

RECORD OF DECISION

SITE NAME AND LOCATION

Bailey Waste Disposal Site
Orange, Texas

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedial action for the Bailey Waste Disposal site in Orange, Texas, developed in accordance with CERCLA, as amended by SARA, and the National Contingency Plan. This decision is based on the administrative record for this site. The attached index identifies the items comprising the administrative record upon which the selection of the remedial action is based.

The State of Texas has been consulted on the selected remedy and has no objections.

DESCRIPTION OF THE SELECTED REMEDY

The remedy addresses the environmental threat at the site by consolidating and stabilizing the waste to prevent human contact and future migration. The components of the selected remedy include:

- Relocation of affected sediments from the marsh and drainage channel, as well as waste from the drum disposal area and pit A-3, to the Waste Channel; and

- stabilization of the Waste Channel and the Area East of Pond A using the technique developed during the remedial design.

DECLARATION

The selected remedy is protective of human health and the environment, attains Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective. This remedy satisfies the statutory preference for remedies employing treatment that reduces mobility as a principal element. Because this remedy will result in hazardous substances remaining onsite, a review will be

conducted within five years after commencement of remedial action and every five years thereafter, to ensure that the remedy continues to provide adequate protection of human health and the environment.

6-28-88
Date

Robert E. Layton Jr.
Robert E. Layton Jr., P.E.
Regional Administrator

DECISION SUMMARY
BAILEY WASTE DISPOSAL SITE
ORANGE COUNTY, TEXAS

I. SITE LOCATION AND DESCRIPTION

The Bailey Waste Disposal Superfund Site is an inactive industrial waste facility located approximately 3 miles southwest of Bridge City, Orange County, Texas, at the north end of the Rainbow Bridge west of Texas State Highway 87 (Figure 1). The site is connected to Highway 87 by a short bridge spanning a drainage channel adjacent to, and parallel with, the highway.

The site is part of a saltwater marshland near the confluence of the Neches River and Sabine Lake. Two ponds were constructed on the property by dredging the marsh and piling the sediments to form levees. The industrial wastes are located in pits along the levees. The site, including the two rectangular ponds, occupies approximately 280 acres.

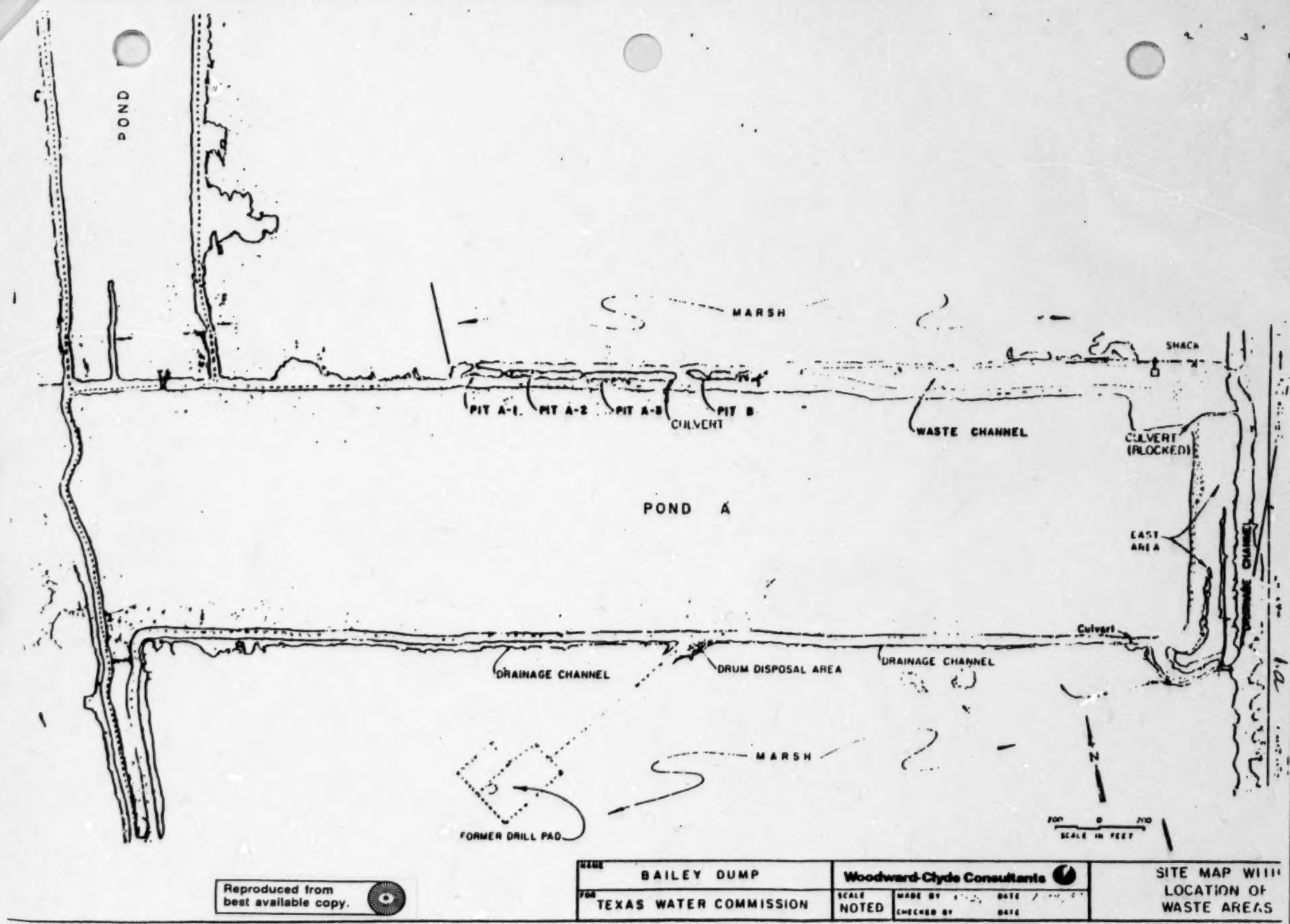
II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

Two ponds, A and B, were constructed in the mid-1950s as part of the Bailey Fish Camp. The fish camp was active until the 1960s when it was destroyed by a hurricane which introduced saline waters into the ponds, killing the freshwater fish.

Industrial wastes, primarily organics, were disposed of along the north and east margins of Pond A during the 1950s and 1960s. Both during industrial waste disposal operations and following their cessation, the site was used to dispose of residential trash.

In 1979, the Environmental Protection Agency (EPA) released a report which stated that industrial wastes were disposed of at the site. The Texas Water Commission did a preliminary assessment of the site in 1980. In 1981 and 1982, Gulf States Utilities (landowner at that time) conducted an investigation to determine the dimensions and chemical characteristics of the waste pits.

In October 1984, the site was proposed for the National Priorities List (sites which appear to present a significant risk to public health or the environment). In December 1984, the State of Texas entered into a Cooperative Agreement with EPA for a Remedial Investigation (RI) and a Feasibility Study (FS). The total funds awarded to the State for these



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BAILEY DUMP	Woodward-Clyde Consultants		SITE MAP WITH LOCATION OF WASTE AREAS
FOR TEXAS WATER COMMISSION	SCALE NOTED	MADE BY / DATE / CHECKED BY / DATE	

FIGURE 1

studies was $707,615. The RI field work began in January of 1986. A final report for the RI was submitted in October 1987.

The Potentially Responsible Parties (PRP) were offered the opportunity to perform the FS. In October 1987, a Consent Order was signed allowing the Bailey Task Force (comprised of PRP's) to conduct the FS. Further fieldwork to additionally characterize the site took place during the FS. A final FS report, which provides a comparison of potential remedial alternatives, was submitted by the Bailey Task Force in March of 1988.

III. COMMUNITY RELATIONS

The Texas Water Commission (TWC) initiated the Remedial Investigation (RI) on the Bailey Waste Disposal site in 1987. Prior to initiation of the study, TWC held an informational meeting to inform local residents about the site history, the proposed studies and the timeframe involved in the Superfund process. The study was completed in late 1987 and TWC held a public meeting on November 17, 1987, to discuss the results of the study.

An Administrative Order was signed on October 11, 1987, with the Bailey Task Force, a group of potentially responsible parties (PRPs) to conduct the Feasibility Study (FS). This study was completed in the Spring of 1988. On April 25, 1988, EPA announced, via press releases, that the FS was available for review at local repositories and for public comment until May 24, 1988. The press release also announced a public meeting on May 17 at the Holiday Inn, Port Arthur and was mailed to the site list. EPA prepared a more detailed fact sheet describing the Superfund process, the background of the site, the alternatives considered, EPA's preferred remedy and the public involvement process. This was also sent to the site mailing list.

The public meeting began at 7:00 p.m. on May 24. About 20 people attended the meeting. Attendees did not wish to formally comment on EPA's preferred alternative. A few questions arose about the time frame and and cost of the project. The meeting adjourned at 7:25 p.m.

IV. SCOPE AND ROLE OF THE RESPONSE ACTION

The environmental threat at the site is degradation of existing conditions and subsequent releases to the environment. The remedial action goal developed in the Feasibility Study was to prevent a future release of contaminants from the site into the surrounding surface waters. The response action must block or eliminate the pathway of a release from the site.

V. SITE CHARACTERISTICS

GEOLOGY

The site is directly underlain by fluvial, alluvial, and deltaic deposits consisting primarily of silty clay and clayey sand. Based upon borings at the site, and along the adjacent highway, the sedimentary sequence can be separated into four distinct units A, B, C, D (Figure 2). The uppermost layer (Unit A) ranges in thickness from 18 to 37 feet and consists primarily of soft clay. The wastes have been deposited in, or on, Unit A.

Underlying Unit A is a loose clayey sand, Unit B, which ranges in thickness from 15 to 28 feet. Units C and D underlie the less-consolidated alluvial sediments of Units A and B. Unit C is a very stiff clay and Unit D is a compact clayey sand. Unit D is generally encountered at 80 - 100 feet below the surface. Because of saltwater intrusion, groundwater found in Units A through D is not a potential source of drinking water. Two aquifers which have been developed for water supply, the Chicot and the Evangeline, are identified in the site vicinity. The Upper Chicot extends to 200 - 300 feet below sea level, and the Lower Chicot is defined to 1200 feet. The Evangeline is located below 1200 feet. Approximately 110 wells are located within a 3 mile radius of the site. The closest public water supply well is 1.5 miles northeast of the site and is 385 feet deep. The Bridge City wells are 2.6 miles northeast and are 585 feet deep.

RI RESULTS

The Remedial Investigation (RI) consisted of a surface and subsurface field investigation to assess the distribution of waste materials and to evaluate the potential for the migration of chemical constituents away from the waste locations. The field activities included installation of monitoring wells, soil borings, and biota sampling. Table 1 shows the range of analyzed constituents for various media.

The site was divided into four major areas. These areas are defined as the Waste Channel, Area East of Pond A, Drum Disposal Area, and the waste pits. The areas are geographically distinct, and to some extent varied in the types of wastes present. Figure 1 shows the four areas and other site features.

The Waste Channel is located along the north side of Pond A along a levee which separates Pond A from the marsh. Industrial wastes and debris are visible over the majority of the ground surface. The waste is generally encountered within 2 feet of the surface with an average thickness of 5 feet and a minimum total volume of 44,000 cubic yards. The major contaminants found were ethylbenzene, styrene, benzene, chlorinated hydrocarbons and polynuclear aromatic hydrocarbons.

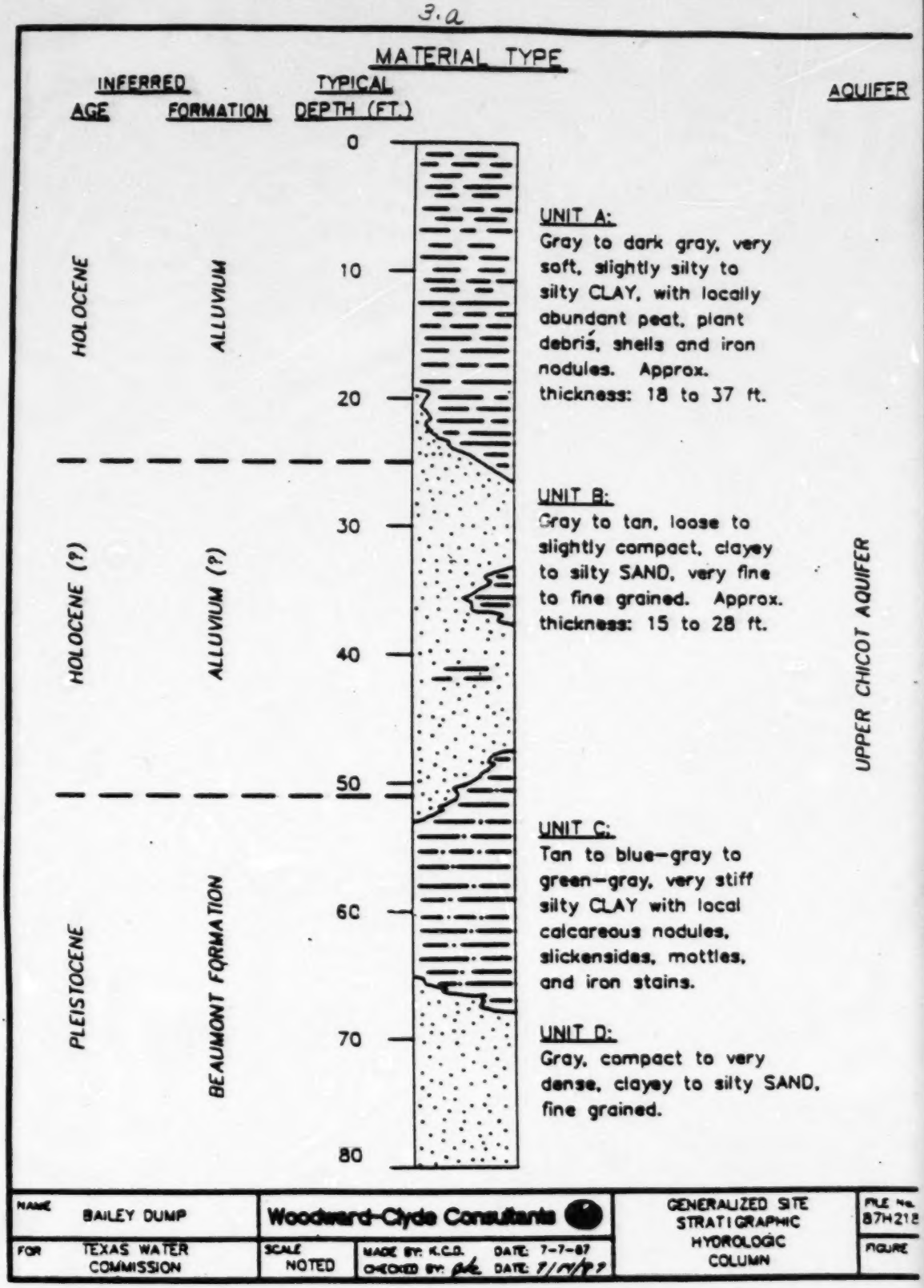
MATERIAL TYPE
INFERRED AGE
FORMATION
TYPICAL DEPTH (FT.)
AQUIFER
0
10
20
30
40
50
60
70
80
HOLOCENE
ALLUVIUM
HOLOCENE (?)
ALLUVIUM (?)
PLEISTOCENE
BEAUMONT FORMATION
UNIT A:
Gray to dark gray, very soft, slightly silty to silty CLAY, with locally abundant peat, plant debris, shells and iron nodules. Approx. thickness: 18 to 37 ft.
UNIT B:
Gray to tan, loose to slightly compact, clayey to silty SAND, very fine to fine grained. Approx. thickness: 15 to 28 ft.
UNIT C:
Tan to blue-gray to green-gray, very stiff silty CLAY with local calcareous nodules, slickensides, mottles, and iron stains.
UNIT D:
Gray, compact to very dense, clayey to silty SAND, fine grained.
UPPER CHICOT AQUIFER
NAME BAILEY DUMP
FOR TEXAS WATER COMMISSION
Woodward-Clyde Consultants
SCALE NOTED
MADE BY: K.C.D. DATE: 7-7-87
CHECKED BY: pbk DATE: 7/14/87
GENERALIZED SITE STRATIGRAPHIC HYDROLOGIC COLUMN
FILE No. 87H218
FIGURE

FIGURE 2

TABLE 1
SUMMARY RANGE OF PRINCIPAL PARAMETERS BY MEDIA

Parameter	Media					
	Waste* (mg/kg)	Soil (mg/kg)	Ground** Water (mg/L)	Surface Water (mg/L)	Sediment*** (mg/kg)	Biota (mg/kg)
Total Volatile	ND-20,200	ND-5,600	0.002-0.013	ND-0.043	ND-102	NA
Total BNA	ND-2,035	ND-86	0.002-0.021	ND	0.090-237	1.01-7.1
Total Organics	0.075-20,200	ND-5,600	0.004-0.032	ND-0.043	0.100-339	1.0-7.1
Total Phenolics	ND-93.2	ND-27.2	ND	0.045[1]	4.9[1]	ND
Lead	ND-1,500	ND-230	ND-0.381	ND-0.006	10.0-536.0	ND-0.32
Arsenic	ND-36	1.7-30	ND-0.022	0.011[1]	12.0[1]	1.2[1]
Chromium	ND-310	ND-31	ND-0.049	ND	6.4-185	0.6-4.4
Zinc	11-1,600	21.0-40	0.008-0.458	ND	24.0-1,270	17-143
PAHs	ND-390	ND-16.7	ND	ND	ND-143	ND
Ethylbenzene	ND-19,000	ND-5,600	ND	ND	ND-53	NA
Styrene	ND-7,300	ND-4.5	ND-0.001	ND	0.002[1]	NA
Chlorinated Aliphatic HC	ND-2,219	ND-2.23	ND-0.002	ND	ND	ND
Chlorinated Aromatic HC	ND-42	ND-0.37	ND	ND	ND	ND

Notes:

[1]Single value

HC = Hydrocarbon
NA = Not analyzed
ND = Not detected

* Includes surface samples
** Leachate well (MW-8) not included
*** Includes pit sediments
] Unknowns and Tentatively Identified Compounds not included; concentrations have not been corrected for blank nor laboratory contaminant concentrations.

218esT1 (*3L-BAL)

The Area East of Pond A separates Pond A from a drainage channel that runs parallel to Highway 87. Rubbery chunks of wastes are visible along the ground surface. The northern portion of this area contains municipal wastes. Where industrial wastes are present, they contain primarily aromatic volatile hydrocarbons and metals. The average thickness of the waste is 4 feet with a minimum volume of 21,000 cubic yards.

The Drum Disposal Area is located south of Pond A and contains fifty-eight corroded drums. The drums are open and a black powdery carbon material covers the ground surface. The material contains low levels of organics with a minimum estimated volume of 80 cubic yards.

The waste pits are located north of Pond A and west of the Waste Channel. Four pits have been identified in this area, A-1, A-2, A-3, and B. Only a few traces of tarry wastes were found in pits A-1, A-2 and A-3, however, Pit B was estimated to have 1900 cubic yards of tar-like wastes. Analysis of the wastes has shown aromatic hydrocarbons, substituted napthalene and PAH compounds. Surface water samples were collected from Pond A, the waste pits, the drainage channel and the marsh. Selenium was the only constituent detected slightly above the primary drinking water standard.

VI. SUMMARY OF SITE RISKS

In order to evaluate endangerment, levels of contaminants present are compared to applicable or relevant and appropriate standards. If no standard exists then a risk estimate is developed based on potential exposure scenarios. Risk estimates had to be developed because no standards exist for soil contamination at this site. Standards do exist for drinking water, however, drinking water is not currently impacted by this site.

A risk assessment was developed by first selecting indicator chemicals, then using toxicology data and exposure scenarios to calculate a risk level. The exposure scenarios are derived by identifying potential pathways and receptors for the contaminants. The pathways considered were:

- Direct contact with the site;
- surface water contamination from site runoff;
- groundwater contamination from leaching of site contaminants; and
- consumption of fish and other marine wildlife.

A calculated risk is presented as an upper bound lifetime excess cancer risk. The actual risk is unlikely to be higher, and may be as low as

zero. A target concentration or cleanup level would be calculated using a 10^{-7} (one in ten million) to 10^{-4} (one in ten thousand) lifetime cancer risk level. The lifetime risk for the direct contact scenario for an adult exposed to the maximum concentrations of contaminants found at the site is 9×10^{-6} and for a child it is 1.2×10^{-5}.

Existing site conditions could degrade through a flood or other natural occurrences, releasing the contaminants contained in the levees into the surrounding marsh.

VII. Description of Alternatives

The Feasibility Study evaluated eight alternatives. Alternative 2 and Alternative 8 were screened out during the FS process.

Alternative 1: No action

This alternative would include construction and maintenance of additional fencing and implementation of institutional controls, such as deed restrictions on land use, to reduce access to the property.

Alternative 3: Stabilization

This alternative would stabilize the Waste Channel and the Area East of Pond A using the technique developed during the design. The techniques to be examined include:

- Inject and mix reagents into the waste with a backhoe;
- pneumatically spread the reagents and mix with paddles;
- continuous feed, treat, and replace mixing plant; and
- excavate a small area, stockpile the waste, mix and replace.

The affected sediments from the marsh and wastes from the Drum Disposal area and pit A-3 would be excavated and relocated to the Waste Channel. Berms would be constructed around the Waste Channel and the area east of Pond A to control runoff of surface water during solidification. The solidification would involve mixing the wastes with a reagent such as cement and allowing the mixture to cure. The processed mixture would reduce the mobility of the wastes and provide strength to support a clay cap. The cap would consist of a flexible liner and a minimum of 3 feet of compacted clay.

Alternative 4: On-Site Landfill

The on-site landfill would be constructed in the southern portion of Pond B. A temporary dike would first be erected in Pond B to segregate a dry working area. The sediments in this area would be excavated to expose the underlying clay layer. A 3-foot-thick compacted clay liner will be constructed on top of the clay layer followed by a flexible membrane liner and a leachate collection system. The perimeter berm of the landfill would be constructed in stages as waste is placed in the landfill.

To avoid instability problems during excavation of the waste, a soil-cement wall would be constructed around the affected areas. The wastes would be excavated and trucked to the on-site landfill. The excavated

waste may be conditioned with a stabilizing agent to ease handling. After the wastes have been removed, the affected areas would be filled and revegetated. The landfill would be covered with a clay cap and liner.

Alternative 5: Offsite Landfill

This alternative consists of excavating all of the wastes and transporting them offsite to an authorized landfill for disposal. A soil-cement wall would be constructed as described for Alternative 4 to prevent instability problems during excavation. Transportation of the wastes would be in 20 cubic yard rolloff boxes. All contaminated water will be transported off the site for treatment or disposal at an authorized facility.

Alternative 6: On-Site Incineration, On-Site Landfill of Ash

This alternative involves treatment of all wastes in a mobile rotary kiln incinerator located on the site. The wastes would be excavated, as previously described in Alternative 5, and conditioned with a material such as sawdust to increase the BTU value. The wastes would be transported directly to the incinerator as they are excavated. The residual ash will be 45 percent of the original volume of the wastes and would be placed in an on-site landfill. The on-site landfill would be constructed as described in Alternative 4. Water entrapped in the wastes and in Pit B, would be transported offsite for treatment or disposal at an authorized facility.

Alternative 7: On-Site Incineration, Off-Site Landfill of Ash

This alternative is the same as Alternative 6, except the residual ash would be accumulated in 20 cubic yard rolloff boxes and transported to an off-site landfill for disposal.

VIII. ALTERNATIVES EVALUATION

Evaluation Criteria

Section 121(a) through (f) of the Superfund Amendments and Reauthorization Act contains factors which EPA must consider in selecting a remedy for a Superfund site. These factors, as well as other criteria used during the evaluation of alternatives, are discussed below:

1. Consistency with Other Environmental Laws (ARARs)

   In determining appropriate remedial actions at Superfund sites, consideration must be given to the requirements of other Federal and State environmental laws. Primary consideration is given to attaining applicable or relevant and appropriate Federal and State public health and environmental regulations and standards. Requirements under Federal and State laws that specifically

address the circumstance at a Superfund site are considered applicable. Relevant and appropriate requirements, while not applicable to a Superfund site, address situations which are sufficiently similar to a site.

2. Reduction of Toxicity, Mobility or Volume

The degree to which alternatives employ treatment that reduces toxicity, mobility, or volume must also be assessed. Relevant factors are:

- o The treatment processes the remedies employ and materials to be treated;
- o the amount of hazardous materials that will be destroyed or treated;
- o the degree of expected reduction in toxicity, mobility, or volume;
- o the degree to which the treatment is irreversible; and
- o the residuals that will remain following treatment, considering the persistence, toxicity, mobility, and propensity for bioaccumulation of such hazardous substances and their constituents.

EPA is also directed by SARA to give preference to remedial actions that utilize treatment to remove contaminants from the environment. Off-site transport and disposal without treatment is the least preferred option where practicable treatment technologies are available.

3. Short-term Effectiveness

The short-term effectiveness of alternatives must be assessed; considering appropriate factors among the following:

- o Magnitude of reduction of existing risks;
- o short term risks that might be posed to the community, workers, or the environment during implementation of an alternative including potential threats to human health and the environment associated with transportation, and redisposal or containment of treatment residuals; and
- o time until full protection is achieved.

4. Long-term Effectiveness

Alternatives are assessed for the long-term effectiveness and permanence they afford along with the degree of certainty that the remedy will prove successful. Factors considered are:

- Magnitude of residual risks in terms of amount and concentrations of waste remaining following implementation of a remedial action, considering the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents;
- type and degree of long-term management required, including monitoring and operation and maintenance; and
- long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated wastes and residuals.

5. Implementability

The ease or difficulty of implementing the alternatives are assessed by considering the following types of factors:

- Degree of difficulty associated with constructing the technology;
- expected operational reliability of the technologies;
- need to coordinate with, and obtain, necessary approvals and permits from other offices and agencies;
- availability of necessary equipment and specialists; and
- available capacity and location of needed treatment, storage, and disposal services.

6. Cost

The types of costs that should be assessed include the following:

- Capital cost;
- operational and maintenance costs;
- net present value of capital and O&M costs; and
- potential future remedial action costs.

7. Community Acceptance

This assessment should look at:

- o Components of the alternatives which the community supports;
- o features of the alternatives about which the community has reservations; and
- o elements of the alternatives which the community strongly opposes.

8. State Acceptance

Evaluation factors include assessments of:

- o Components of the alternatives which the State supports;
- o features of the alternatives about which the State has reservations; and
- o elements of the alternatives under consideration that the State strongly opposes.

9. Overall Protection of Human Health and the Environment

Following the analyses of the remedial options against individual evaluation criteria, the alternatives are assessed from the standpoint of whether they provide adequate protection of human health and the environment considering all the criteria.

IX. Summary of the Comparative Analysis of Alternatives

ALTERNATIVE 1

The remedial investigation determined that the groundwater and surface water are not currently impacted by the site. Therefore, ARARs for groundwater and surface water are not concerns. No ARARs exist at this site for contaminated soils, so no chemical-specific ARARs are available.

Alternative 1 does not provide a reduction of toxicity, mobility or volume. No short-term risks are associated with no action, however, this alternative does not provide long-term protection from release.

The construction of additional fencing would not involve any implementation problems. The present worth of this alternative is $605,000.

No action does not provide for overall protection of human health and the environment because it does not address the threat of release from the site into the surrounding environment.

ALTERNATIVE 3

Guidelines governing capping are relevant to this alternative. The design of the cap would meet or exceed the requirements for cap permeability, installation, maintenance and runoff control. Stabilization of the wastes would reduce the mobility of the wastes with a slight increase in the volume. Solidification reduces the toxicity of the wastes by decreasing the amount of contaminants that can leach from the wastes.

Solidification may involve some excavation that would expose the wastes to the atmosphere. To decrease the potential for adverse air emissions or problems associated with surface runoff, only small areas will be excavated or open at any one time. With proper maintainance, this alternative would provide long-term protection. The timeframe for implementation of this alternative is 14 months.

Stabilization uses proven technologies. The shallow water table and surrounding surface water will require controls to prevent infiltration during construction. The present worth of this alternative is $13.7 million.

Stabilization of the site would reduce the potential for a release and provide overall protection to the environment.

ALTERNATIVE 4

Excavation of the wastes and transportation of them to an on-site landfill slightly increases the volume of the wastes. The mobility is reduced by containment of the waste, however, the toxicity would remain the same. The on-site landfill would meet all RCRA guidelines for design and construction of above-grade landfills in a floodplain.

Removal of the wastes would involve significant site disturbance within a sensitive ecosystem. The surrounding environment would experience exposure to the wastes. With proper maintainance, this alternative would provide long-term protection. The timeframe for implementation is 30 months.

Removing the wastes from a shallow groundwater environment may pose stability and water management problems. Extra precautions such as dikes and a soil-cement wall will have to be constructed to prevent these problems.

The on-site landfill would provide long-term protection to the environment, however, the short-term risks associated with the extensive handling of the wastes could impact the environment during remediation. The present worth of this alternative is $20,342,000.

ALTERNATIVE 5

Excavation of the wastes and transportation offsite would slightly increase the volume of the wastes because a conditioner would be added to ease handling. The mobility would be reduced by containment of the wastes, however, the toxicity would remain the same.

Removal of the wastes could involve significant site disturbance within a sensitive ecosystem. The surrounding environment would experience exposure to the wastes. With proper maintainance, this alternative would provide long-term protection and would take 20 months to implement.

Removing the wastes from a shallow groundwater environment may pose stability and water management problems due to infiltration during remediation. Extra precautions such as dikes and a soil-cement wall will have to be constructed to prevent these problems.

The offsite landfill would provide long-term protection at the site, however, the short-term risks associated with the extensive handling of the wastes could impact the environment during remediation. The present worth of this alternative is $27,702,000.

ALTERNATIVE 6

Excavation of the wastes, followed by incineration, would decrease the volume of the wastes by 55 percent. The mobility of the ash would be reduced by containment in an on-site landfill. The toxicity of the organic constituents would be reduced, however, the metals in the ash would be more concentrated.

Removal of the wastes for incineration would involve significant site disturbance within a sensitive ecosystem. The surrounding environment could experience exposure to the wastes. With proper maintainance, this alternative would provide long-term protection and take 28 months to implement.

Removing the wastes from a shallow groundwater environment may pose stability and water management problems due to infiltration during remediation. Extra precautions such as dikes and a soil-cement wall will have to be constructed to prevent these problems.

On-site incineration with an on-site landfill would provide long-term protection to the environment, however, the short-term risks associated with this alternative could impact the environment during remediation. The present worth of this alternative is $61,462,000.

ALTERNATIVE 7

Excavation of the wastes, followed by incineration, would decrease the volume of the wastes by 55 percent. The mobility of the ash would be

reduced by containment in an off-site landfill. The toxicity of the organic constituents would be reduced, however, the metals in the ash would be more concentrated.

Removal of the wastes for incineration would involve significant site disturbance within a sensitive ecosystem. The surrounding environment would experience exposure to the wastes. This alternative would provide long-term protection and would take 22 months to implement.

Removing the wastes from a shallow groundwater environment may pose stability and water management problems. Extra precautions will have to be taken to prevent these problems. Incineration involves multiple steps of handling the wastes which increase the risks of exposure.

On-site incineration with an offsite landfill would provide long-term protection to the environment, however, the short-term risks associated with this alternative could impact the environment during remediation. The present worth of this alternative is $63,302,000.

X. SELECTED REMEDY AND STATUTORY DETERMINATIONS

The selected remedy at the Bailey Waste Disposal site is Alternative 3, Stabilization. The goals and objectives of remedial action, as defined in the Feasibility Study, are to minimize the potential for waste migration and the potential for short-term air emissions resulting from remediation. Stabilization will minimize the potential for waste migration by blocking the route of transport. Short-term air emissions will be reduced by employing an in-situ method or operating in small areas. Short-term risks to personnel and the environment will be minimal because extensive waste handling is not involved.

The Applicable or Relevant and Appropriate Requirements for the selected alternative are:

40 CFR 264.18(b) (RCRA) - Facilities in 100-year floodplains must be designed, constructed, operated and maintained to avoid washout.

Executive Order 11988 (Floodplain Management) - Action taken must avoid adverse effects and minimize potential harm to the surrounding area.

40 CFR 264 (RCRA) - Construction requirements for hazardous waste storage facilities.

29 CFR 1910 (Occupational Health and Safety Act) - Protection standards for workers.

Alternative 3 addresses the environmental threat by consolidating and stabilizing the waste to prevent human contact and future migration. This alternative provides protection to human health and the environment, with minimum short-term impacts. With the exception of Alternative 1, Alternative 3 can be completed in the shortest timeframe and at a cost less than the other alternatives that also met the established goal of the response action.

ATTACHMENT A
Bailey Waste Disposal Site
Responsiveness Summary

Comment #1

"Based upon a review of the Feasibility Study and the preceeding Remedial Investigation, it would appear that the "no action" alternative, which would include continuation of site security, is more than adequate to address the site under Superfund."

EPA Response to Comment #1

The Bailey site is located in a floodplain so the wastes have the potential to migrate into the surrounding surface waters due to erosion or collapse of the levees during a flood. The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requires that EPA abate the danger of an actual or threatened release at a site. Because of the threat that is present at the Bailey site, the Feasibility Study developed the primary goals and objectives that a remedial action must meet. The remedial action must minimize the potential for waste migration and protect human health and the environment. The "No Action" alternative does not meet the established goals and objectives because it does not address or mitigate the threat of a release.

Comment #2

"The Bailey Task Force believes that, based upon all studies to date, the Site is a prime canidate for a no-action alternative.... The Bailey Task Force also believes that, except for the no-action alternative, EPA's preferred alternative, stabilization, is the best remedy for the Bailey site."

EPA's Response to Comment #2

See response to Comment #1.

Comment #3

"... a roadway would have to be built across the area east of Pond A in order to reach the westerly portion of our 741 acres. This will cause engineering and public awareness problems which are certainly unacceptable; therefore an alternative solution to access as well as compensation for the land area being utilized for waste disposal must be considered."... "The best solution would be to dispose the waste offsite and out of the area."

The EPA agrees that it would be unacceptable to construct a roadway across the Area East of Pond A, as a road could jeopordize the integrity of the stabilized area. When completed, the selected remedy will not affect access to the surrounding property. Stabilization will only affect the areas that are presently contaminated. It will not create new waste areas.

Offsite disposal of the wastes was evaluated in the Feasibility Study, however, it was not selected because of possible implementation problems and short-term impacts. CERCLA requires that offsite remedies should be the least favored when onsite remedies are available.

ATTACHMENT B

INTRODUCTION

Section 113(j)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (**CERCLA**) provides that judicial review of any issues concerning the adequacy of any response action shall be limited to the administrative record which has been compiled for the site at issue.

Section 113(k)(1) of **CERCLA**, requires that the United States Environmental Protection Agency (Agency) establish administrative records for the selection of **CERCLA** response actions. The administrative record is the body of documents upon which the Agency based its selection of a response action. The Agency's decision on selection of a response action must be documented thoroughly in the administrative record. The Agency must ensure that the record is a compilation of documents leading up to and reflecting the Agency's response decision.

In accordance with U.S. EPA Headquarters OSWER Directive 9833.3, Section 113(k) of the Comprehensive Environmental Response, Compensation and Liability Act (**CERCLA**), as amended in 1986 by the Superfund Amendments and Reauthorization Act (**SARA**) the U.S. EPA is required to compile and make available to the public Administrative records containing documents used to support response actions authorized under **CERCLA** and **SARA**. The Administrative Records are to be maintained at the relevant U.S. EPA Regional Offices as well as "at or near the facility at issue."

This Administrative Record File Index consists of information upon which the Agency based its decision on selection of response actions. It is a subset of information included in the site files. The records in this Administrative Record File Index have been arranged in chronological order (from the earliest date to the most recent date), based on the date of the corresponding document. Each document contained in the Administrative Record File has been stamped with a unique Document Number, to assist in the location of the document within the Record File.

This Administrative Record File Index has been compiled in accordance with OSWER Directive Number 9833.1a Interim Guidance on Administrative Records for Decisions on Selection of **CERCLA** Response Actions. This guidance reflects, to the extent practicable, revisions being made to the National Contingency Plan (NCP).

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ADMINISTRATIVE RECORD INDEX

FINAL

SITE NAME: Bailey Waste Disposal Site

SITE NUMBER: TXD 980864649

INDEX DATE: 06/06/88

administrative Record
Index not included

Attachment C.

18.

TEXAS WATER COMMISSION

Paul Hopkins, Chairman
John O. Houchins, Commissioner
B. J. Wynne, III, Commissioner

J. D. Head, General Counsel
Michael E. Field, Chief Examiner
Karen A. Phillips, Chief Clerk

Allen Beinke, Executive Director

June 27, 1988

HAZARDOUS WASTE MANAGEMENT DIV.

Allyn M. Davis, Ph.D., Director
Hazardous Waste Management Division
U. S. Environmental Protection Agency
Region VI
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: Bailey Waste Disposal Superfund Site
Draft Record of Decision

Dear Dr. Davis:

We have reviewed the proposed Record of Decision (ROD) for the Bailey Waste Disposal Site. We have no objection to the selected remedy of stabilization (Alternative 3) as described in the draft ROD of June 16, 1988.

Sincerely,

Allen Beinke

Allen P. Beinke
Executive Director